


This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of

\$ 3580.00

  
Resident Geologist or  
~~Resident Mining Engineer~~

Considered as representation work under  
Section 53 (4) Yukon Quartz Mining Act.

  
Commissioner of Yukon Territory  
ADMINISTRATOR OF THE YUKON TERRITORY

A

GEOLOGICAL REPORT

ON

ERIN MINERAL CLAIMS 1-16

Sheet 116-J-5

13 miles S.W. of Bear Cave Mtn.

139°45' / 66°25'

(DAWSON MINING DIVISION, Y.T.)



by

H.R. Bullis

May 22 - August 12, 1974



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Introduction and Summary

The Erin mineral claims 1-16 were staked in August, 1973 for C. Smith and were optioned by Brascan Resources Limited in the fall of 1973.

On various intervals during the period May 22 to August 11, 1974 work was carried out on the claims by Brascan personnel. Geological data was compiled and incorporated into this report. From these data the conclusion was drawn that an economic deposit is unlikely to exist on the Erin claims and the recommendation was made that Brascan Resources Limited relinquish their option on the claims.

During the course of the work to date \$3,580 has been spent.

Ownership

The Erin mineral claims 1-16 were staked in late August, 1973 under the supervision of Mr. Clyde Smith to whom the title of the claims was later passed. The claims were recorded in Dawson City, Y.T. on August 29, 1973. In the fall of 1973, Brascan Resources Limited acquired an option on the entire Erin group and may earn a ninety per cent interest in the claims providing they carry out stipulated work commitments.

Location and Access

The Erin claims are located near 139°45'/66°25' approximately thirteen miles southwest of Bear Cave Mountain. The claims fall within the boundaries of NTS sheet 116-J-5. The Dempster Highway lies some sixty miles to the east but there are no other all-weather roads in the area.

Access to the claims during the summer months is limited to helicopters. The nearest all-weather airstrip is the Mallard airstrip lying about forty miles to the south and it is accessible only to light aircraft or S.T.O.L.-equipped aircraft. Another all-weather 'strip, the Cath, lies about thirty miles to the east of the claims, but its useability has not yet been established. Therefore, during the summer months, any supplies destined for the Erin claims must be freighted up the Dempster Highway to the airstrip at Mile 166 and either flown in from there by helicopter

or flown in by fixed-wing aircraft to an all-weather 'strip (Mallard or Cath) and from that point by helicopter.

During the winter months, winter roads constructed by various oil companies in the area become useable. One of these roads passes less than two miles south of the claim block and connects up with the Dempster Highway due east of the claims. However, these roads are not maintained and obstacles such as rivers complicate the utilization of these roads. There are two winter airstrips - Blackfly and Bear Cave - lying within sixteen miles of the claims and it is possible to place supplies close to the claims by using the 'strips during the snow months (up to the end of April).

#### Work Record

From a base-camp established on Fishing Branch Creek, about 2 miles southeast of the claims, work on the Erin group began on May 22, 1974 with a combined prospecting traverse by nine Brascan personnel. All of the operations were helicopter-assisted and the machines used were a Bell 206-B and a Bell 47G-B2 both provided by Trans North Turbo Air out of Whitehorse, Y.T.

No further work was done until June 28, 1974 when G. Lightburn and D. Dickinson, both Brascan personnel, began detailed mapping and prospecting on the claims. On July 14, 1974, A. Cook and T. Hubl, also Brascan personnel, completed a four-day chain

and compass survey of the sixteen Erin claims. On August 11, 1974, G. Lightburn and D. Dickinson completed two days of blasting, trenching and chip-sampling on the Erin showings. During the period between May 22 and August 11, 1974 both the author and other Brascan supervisory personnel made visits to the Erin claims to map and/or prospect.

From August 8 to August 12, 1974 the author was drafting maps and plans for this report.

### Geology

The geology underlying the Erin group consists of a series of easterly-dipping carbonates some of which have undergone dolomitization. A second phase of dolomitization, brecciation and mineralization has taken place producing a horizon throughout which pods of sphalerite and smithsonite occur. Directly to the east of the claim group lies a north-south trending thrust that exposes older carbonates on surface. The continuity of the bedding is disrupted at that point.

At the top of the stratigraphic section on the Erin claims lies a limestone unit that is made up predominantly of crinoid remains. Beneath this unit lies a series of "dirty" limestones that weather to a platy or "shaley" appearance. Included within this unit are beds containing numerous ostracoda remains. The next step down in the sequence is a light-to medium-gray fine-grained limestone which forms dominant cliffs in places. Directly below the

fine-grained limestones are found an extensive series of bedded dolomites. The contact between the limestones and dolomites is poorly-defined and probably is gradational.

It is within the dolomites that the sphalerite-smithsonite mineralization is located.

The bottom of the dolomite series is not seen on the Erin claims.

Outcrop of the Erin claims is scarce and limited primarily to creek bottoms and ridges. Therefore much of the geology is interpreted from what can be seen in talus as well as the outcrop.

#### Mineral Showings

Mineralization on the Erin group of claims consists of pyrite and sphalerite weathering to secondary smithsonite. These minerals are found in breccias, shears, fracture-fillings and partial replacements of the original dolomite. The mineralization appears to be confined to one bed or narrow series of bedded dolomites in that the trace of the mineralized talus conforms to the strike of nearby outcropped bedding planes. The mineralization also appears to be "poddy" in that nowhere is there a continuous stretch of mineralized talus along strike.

A grab-sample taken from sheared outcrop assayed 1.35 percent zinc. A series of chip samples and grab samples have been taken recently but assay results are not yet available.

At the moment it appears that while the grade of the mineralization in the pods could assay up to about ten percent zinc, the overall grade of the mineralized bed would be less than one percent. The "pods" appear to be up to six-hundred feet apart.

Conclusions

From the above information and information gathered during visits to the property it is concluded that it is highly unlikely that an economic ore deposit will be found on the Erin claims. Any high-grade "pods" that occur would be diluted by separating barren or low-grade material. Also, the down-dip extension of the mineralized horizon is cut-off by a major regional thrust that carries older (probably Silurian) cherts and carbonates to the surface to the east of the claim group.

Recommendations

The author, on the basis of the conclusions above, recommends that Brascan Resources Limited relinquish the option on Erin mineral claims 1-16 and turn them back to the original owner, Mr. Clyde Smith.

Respectfully submitted  
this 12th day of August, 1974.



H.R. BULLIS, B.Sc.

I hereby certify that the work described in this report was carried out under my supervision.



F.B. WHITING  
Member: Assoc. of Prof. Engineers  
(Yukon)  
Member: Assoc. of Prof. Engineers  
(B.C.)

## Appendix I

### Personnel working on Erin mineral claims:

Supervisor	H.R. Bullis 206-1318 56th Street Delta, B.C.
Geologist	G. Lightburn 1969 Waterloo Street Vancouver, B.C.
Assistant	D. Dickinson 6126 Ewart Street Burnaby, B.C.
Assistant	A. Cook 1091 Laburnum Road Victoria, B.C.
Assistant	T. Hubl Box 496 5959 Student Union Mall University of B.C. Vancouver 8, B.C.

## Appendix II

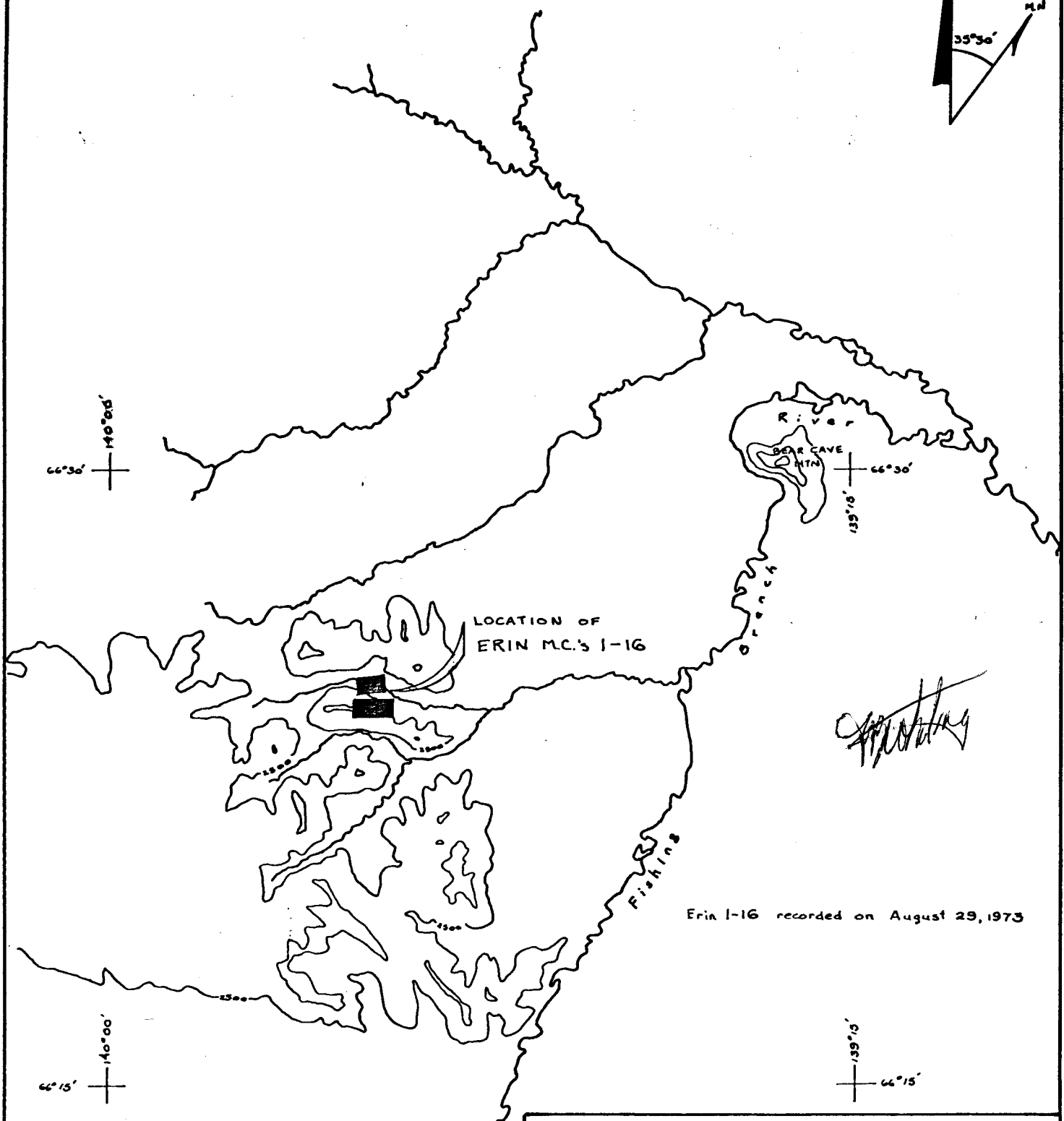
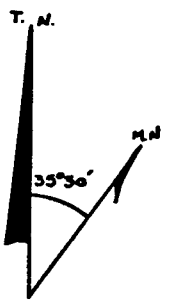
Breakdown of expenditures on the Erin mineral claims:

Date	Wages	Helicopter Support*	Reports & Drafting	Camp** Costs
May 22	\$ 295	\$ 490	\$	\$ 90
June 28	69	96		20
29	69	96		20
July 2	69	96		20
7	69	96		20
11	131	192		40
12	131	192		40
13	131	192		40
14	69	96		20
15	89	48		20
16			39	10
Aug. 8	50			10
9			50	10
10			50	10
11	69	96	50	30
12			50	10
<b>Totals</b>	<b>\$1,241</b>	<b>\$1,690</b>	<b>\$239</b>	<b>\$410</b>

GRAND TOTAL \$3,580.00

\* Trans North Turbo Air invoices Nos. 604, 3109, 3110, 3113, 3118, 3123, 3124, 3125, 2136, 3127, 3150, 3153.

\*\* Based on \$10 per man per day.



Erin 1-16 recorded on August 29, 1973

66°30' + 140°00'

66°30' + 139°10'

66°15' + 140°00'

66°15' + 139°15'

### Brascan Resources Limited

CLAIMS LOCATION MAP  
ERIN MINERAL CLAIMS  
DAWSON MINING DIVISION  
YUKON TERRITORY

Scale: 1" = 4 miles (approx)	FIG: 1
Date: August 11, 1974	By: H. R. Bullis

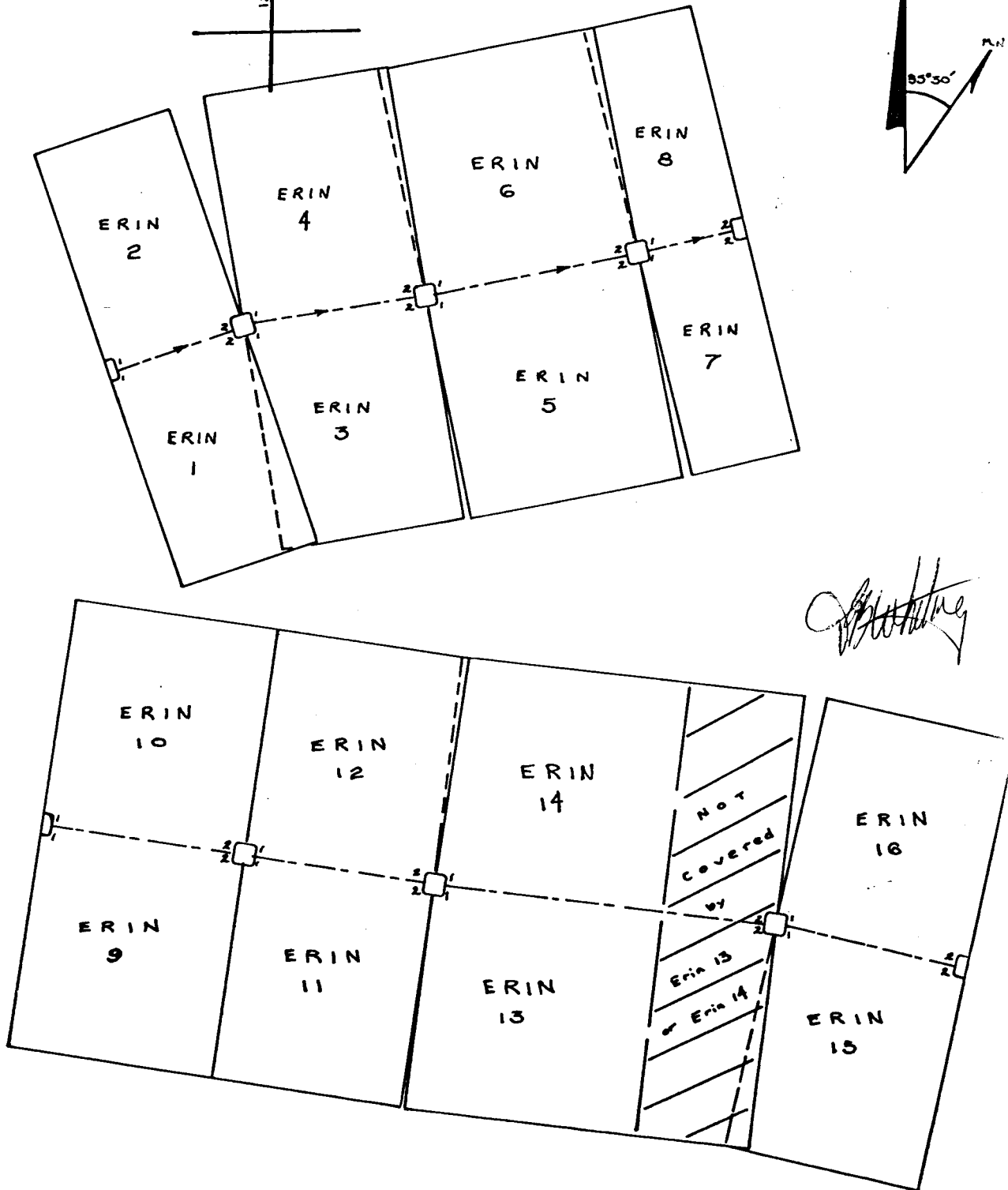
To accompany Assessment Report by H. R. Bullis - Aug. 11, 1974  
Traced from 1" = 4 mile N.T.S. sheet 116J-K(EK) - Porcupine River

66°25'

139°43'

T. N.

85°30'



Note: claims surveyed by A. Cook and  
T. Hubl using chain and compass.

To accompany Assessment Report by H.R. Bullis (August 11, 1974)

### Brascan Resources Limited

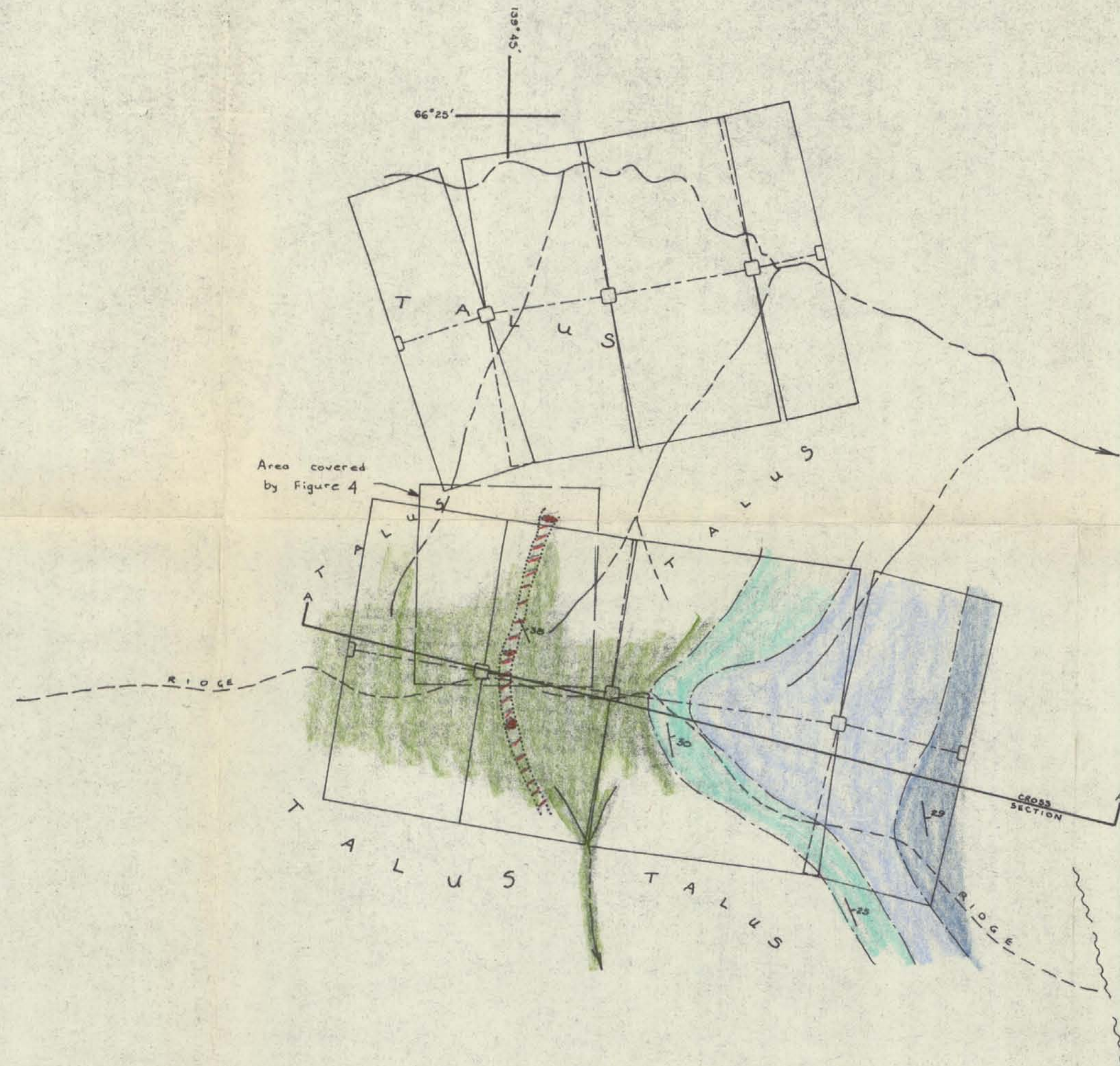
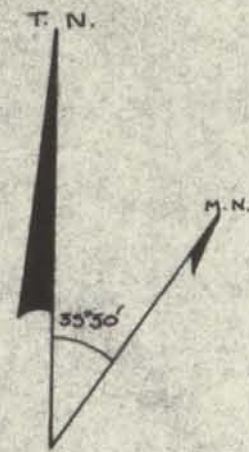
CLAIM SURVEY  
ERIN MINERAL CLAIMS  
DAWSON MINING DIVISION  
YUKON TERRITORY

Scale: 1" = 1,000 feet

FIG: 2

Date: August 10, 1974

By: H. R. Bullis



- LEGEND**
- LIMESTONE UNIT CONTAINING UP TO 60% CRINOID FRAGMENTS.
  - LIMESTONE UNIT WITH OCCASIONAL SHALY BEDS AND BEDS WITH OSTRACODE REMAINS.
  - LIGHT- TO MEDIUM-GRAIT FINE-GRAINED LIMESTONE
  - UNDIFFERENTIATED BEDS OF DOLOMITES.
  - TRACE OF MINERALIZED HORIZON ON SURFACE.
  - OUTCROP OF MINERALIZED DOLOMITE.
  - CLAIM POST AND CLAIM LIMITS.
  - STREAMS { STEADY FLOW  
INTERMITTANT
  - GEOLOGICAL CONTACTS; OBSERVED AND INFERRED.
  - STRIKE AND DIP OF BEDDING.

**BRASCAN RESOURCES LIMITED**

GEOLOGY  
ERIN MINERAL CLAIMS  
DAWSON MINING DIVISION  
YUKON TERRITORY

SCALE: 1" = 1,000 FEET      FIG.: 3  
DATE: August 10, 1974      BY: H.R. Bullis

To accompany Assessment Report by H.R. Bullis (August 11, 1974)

*Handwritten signature*



Grab sample from trench assayed:  
 Zn - 1.35%  
 Pb - less than 0.05%  
 Cu - less than 0.05%  
 Ag - 0.02 oz. per Ton



**LEGEND**

- DARK GRAY-MEDIUM-TO FINE-GRAINED DOLOMITE
- DOLOMITE BRECCIA/PSEUDO-BRECCIA
- SPHALERITE-SMITHSONITE MINERALIZATION
- OUTCROP
- AREA OF MINERALIZATION IN TALUS
- TRENCH
- SURVEY POINT - CHAIN AND COMPASS SURVEY
- DIRECTION OF DRAINAGE
- STRIKE AND DIP OF BEDDING
- STRIKE AND DIP OF FRACTURING
- ON-SURFACE PROJECTION OF MINERALIZED HORIZON. MINERALIZATION DOES NOT APPEAR TO BE CONTINUOUS THROUGHOUT.
- CHAIN LINES AND POSTS, TIED IN BY CHAIN AND COMPASS SURVEY.

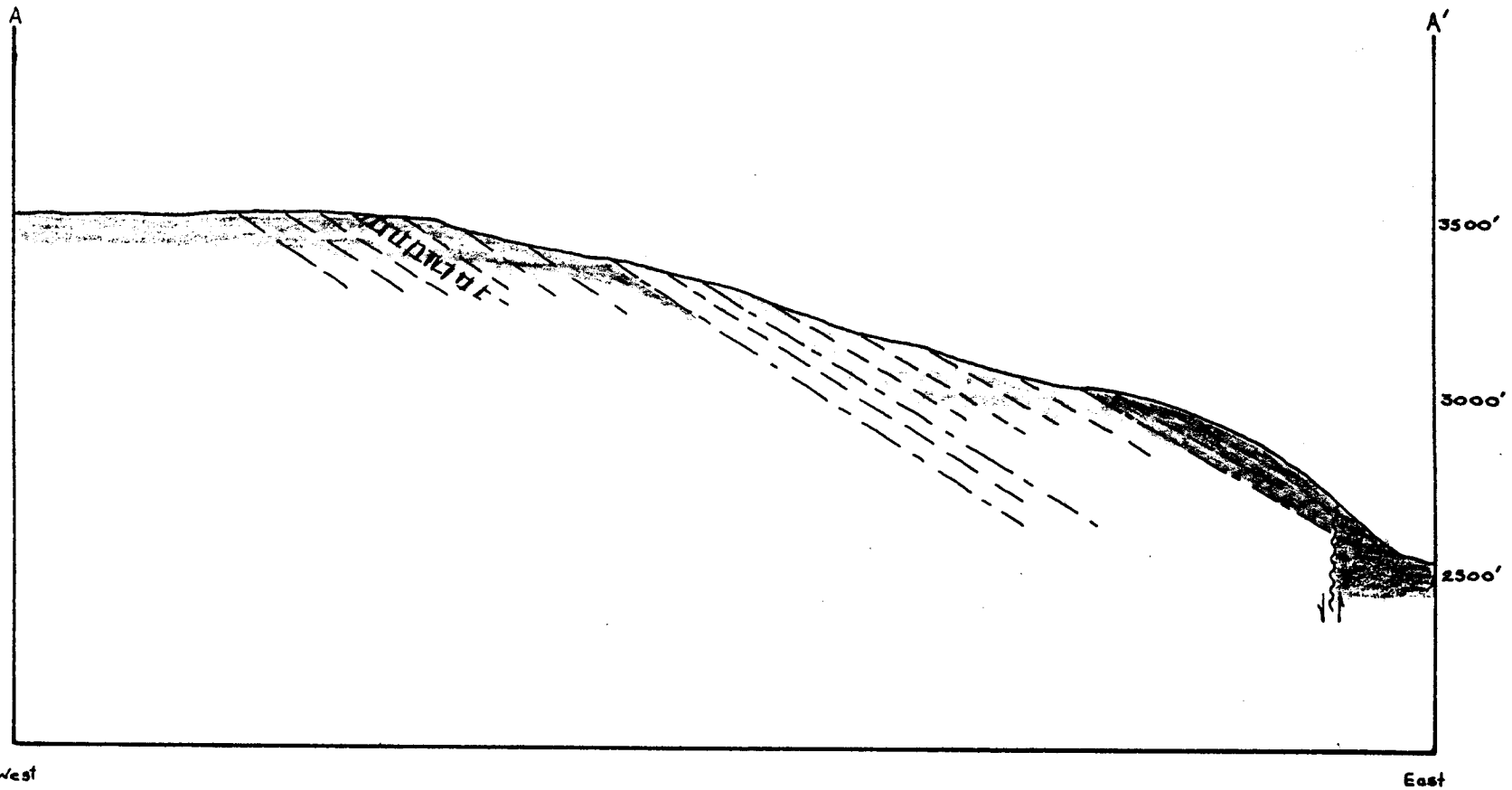
*[Signature]*

PG summary Assessment Report by H.R. Quinn (August 1974)










**BRASCAN RESOURCES LIMITED**

DETAILED GEOLOGY OF ERIN SHOWINGS  
 ERIN MINERAL CLAIMS  
 DAWSON MINING DIVISION  
 YUKON TERRITORY

SCALE: 1" = 50 FEET	DRAWN BY: H.R. QUINN	FIG. 4
DATE: August 3, 1974	GEOLOGY: C. LEIGHTON	



LEGEND

-  "Crinoidal" Limestone
  -  "Shaley" Limestone
  -  Light- to medium gray fine-grained Limestone
  -  Undifferentiated Dolomites
  -  Cherts and Limestones with nodular chert
  -  Projection of mineralized horizon to depth.
  -  Geological contact
  -  Bedding
  -  Fault
- ↑ Younger  
 DEVONIAN  
 probably SILURIAN

*H.R. Bullis*

To accompany Assessment Report by H.R. Bullis (August 11, 1974)

**Brascan Resources Limited**

**CROSS-SECTION A-A'  
ERIN MINERAL CLAIMS**

DAWSON MINING DIVISION  
YUKON TERRITORY

Scale: Vertical/Horizontal: 1" = 500'/1,000'

FIG: 5

Date: August 11, 1974

By: H.R. Bullis